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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,350	09/30/2005	Jao Wu	97674.00001	6322

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MCCARTER & ENGLISH LLP
CITYPLACE I
185 ASYLUM STREET
HARTFORD, CT 06103

EXAMINER

NGUYEN, DINH Q

ART UNIT	PAPER NUMBER
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3752

MAIL DATE	DELIVERY MODE
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05/01/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/524,350

Applicant(s)

WU, JAO

Examiner

Dinh Q. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-11 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/15/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed September 30, 2005 fails for not having a signature.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The first inlet is improperly cited for not referring to a second inlet

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 6, 7, 9, 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Davies.

Davies discloses an apparatus for regulating flow through a spray nozzle 16 comprising: a circular chamber 10 with end walls, a peripheral sidewall, a central axis; a plurality of inlets 13 enter the chamber tangential to the peripheral wall to form a primary

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lower layer, an outlet exiting 16, a second flow path by inlet 12 radially inwardly toward the central axis to form a secondary layer (see figure 1-3).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4, 6, 9, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perera in view of Hall.

Perera teaches all the limitations of the claims except for at least one secondary upper layer that substantially follows a second flow path radially inwardly towards the central axis, the primary lower layer and said secondary upper layer interact and support each other in a non-destructive manner from peripheral side wall to the outlet. However, Hall discloses a spray nozzle with a circular chamber 14, a first inlet 13 near the peripheral side wall of chamber 14, an outlet, the first inlet 13 has a primary lower layer b, a secondary upper layer follows a second flow path¹⁷ radially inward toward the central axis, wherein the primary lower layer and said secondary upper layer interact and support each other in a non-destructive manner from peripheral side wall to the outlet (see page 1, lines 78+). Therefore, it would have been obvious to one having ordinary skill in the art to configure the device of Perera with a shower head as suggested by Hall. Doing so would provide an effective way for mixing (see page 1, lines 5+).

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8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Davies in view of Jacob or Perera in view of Hall as applied to claims 1-4, 6, 9, and 11 above, and further in view of Jacob.

Davies or Perera in view of Hall teaches all the limitations of the claims except for a shower head. However, Jacob discloses a radially inward inlet 58 and a circular chamber 48. Therefore, it would have been obvious to one having ordinary skill in the art to configure the device of Davies or Perera in view of Hall with a shower head as suggested by Jacob. Doing so would provide an effective shower head.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Perera in view of Hall as applied to claims 1-4, 6, 9, and 11 above, and further in view of Hunter et al.

Perera teaches all the limitations of the claims except for the disc with curved portion. However, Hunter discloses a fluid regulating device with inlets 61 and 62 enter the chamber tangential to the peripheral wall and disc 41/42 having curved portion (see figures 2 and 3). Therefore, it would have been obvious to one having ordinary skill in the art to have provided the device of Perera with the disc with curved portion as suggested by Hunter. Doing so would provide an effective way for mixing fluids (see column 2, lines 28+).

Allowable Subject Matter

10. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base

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claim and any intervening claims and rewritten or amended to overcome the objections and rejections under 35 U.S.C. 112, 2nd paragraph, set forth in this office action.

Response to Arguments

11. Applicant's arguments filed 2/08/07 have been fully considered but they are not persuasive.

12. Applicant's arguments with respect to claims 1-4, 6-11 have been considered but are moot in view of the new ground(s) of rejection.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

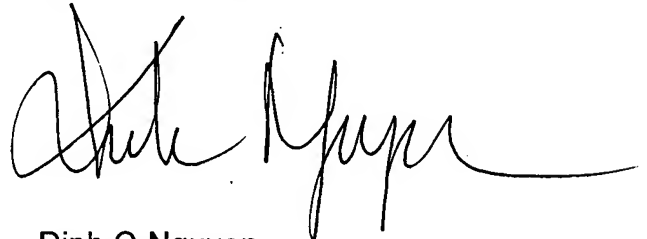
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dinh Q. Nguyen whose telephone number is 571-272-4907. The examiner can normally be reached on Monday-Thursday 6:00-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on 571-272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Dinh Q. Nguyen', with a long horizontal flourish extending to the right.

Dinh Q. Nguyen
Primary Examiner
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dqn